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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 09/206,458 | 12/07/1998 | JOHN A. GREAVES | 4532670/6974 | 5547 |
| 26386 | 7590 | 11/20/2003 | EXAMINER | |
| DAVIS, BROWN, KOEHN, SHORS & ROBERTS, P.C. THE FINANCIAL CENTER 666 WALNUT STREET SUITE 2500 DES MOINES, IA 50309-3993 | | | TATE, CHRISTOPHER ROBIN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1654 | |

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|--|---------------------------------------|--|
| <p align="center">Office Action Summary</p> | Application No. 09/206,458 | Applicant(s) GREAVES ET AL. | |
| | Examiner Christopher R. Tate | Art Unit 1654 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 24-26 and 28-39 is/are pending in the application.
- 4a) Of the above claim(s) 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 28-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission, including the preliminary amendment, filed on September 25 has been entered.

Claims 28-39 are presented for examination on the merits (please note that claims 24-26 are withdrawn and should be canceled in response to this Office action).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 28-39 are rendered vague and indefinite for the following reasons:

- Each of the independent claims (claims 28, 31, 34, and 37) recite “contacting the botanical material in a vessel with a blend of tetrafluoroethane and an organic solvent consisting of ... [a particular organic solvent]” which is closed language with respect to a blend comprising additional organic solvents therein. However, dependent claims 29, 32, 35, and 38 recite “The process of claim [] further comprising at least one second co-

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solvent selected from the group consisting of [a Markush group of organic solvents]”, which contradicts the closed language recited in the independent claims. Accordingly, the limitations of claims 29, 32, 35, 38 lack proper antecedent basis with the claims from which they depend because the limitations recited in claims 29, 32, 35, and 38 are outside the limitations of claims 28, 31, 34, and 37, respectively.

Claims 29, 32, 35, and 38 are also rendered vague and indefinite because it is unclear if the phrase “further comprising at least one second co-solvent selected from the group consisting of [a Markush group of organic solvents]” is attempting to define an alternative embodiment of the claims from which they depend – e.g. are these other co-solvents in place of tetrafluoroethane?

All other claims depend directly or indirectly from rejected claims and are, therefore, rejected under USC 112, second paragraph for the reasons set forth above.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 28-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,450,935. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are drawn to a method of extracting organic components (which encompass antioxidants and essential oils) from botanical plants using similar steps including extracting with tetrafluoroethane and one or more organic cosolvents (such as those instantly claimed).

Claims 28-39 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 09/082,109. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are drawn to extracting an organic component from an organic/plant material comprising similar extraction steps within a vessel comprising a blend of solvents including tetrafluoroethane and one or more organic cosolvents (such as those instantly claimed).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell et al. (WO 95/26794) and Kimura et al. (US 4,380,506).

Although difficult to interpret, due to the USC 112, second paragraph rejections above, a process for extracting a first and second component from an organic/botanical material comprising contacting the material with a blend of solvents including tetrafluoroethane and one or more co-solvents, removing the organic material from the solution of components, then removing the solvent blend (e.g. via evaporation) therefrom is apparently claimed.

Powell et al. teach a method of extracting a natural product (e.g., flavored/edible oils and aromatic oils) from organic materials such as botanical materials using a mixture of tetrafluoroethane and one or more cosolvents. Powell et al. disclose contacting the material with the solvent mixture, removing the material therefrom, then removing the solvent blend via evaporation and distillation to obtain the desired product (see, e.g., pages 2, 4-5, 7-8, Examples, and claims). Powell et al. does not expressly teach extracting a botanical from among those instantly claimed nor using particular cosolvents claimed.

Kimura teaches a method of effectively obtaining polar antioxidant compounds from botanical materials using a mixture of solvents including acetone, methanol and hexane mixtures, wherein the botanical material is contacted with the solvent mixture, the botanical material is removed (filtered off), and the solvent blend is then removed via distillation (see, e.g., col 4, lines 3-53, col 5, lines 1-37, col 6, lines 47-52, cols 8-9, Example 2, and claims).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to obtain botanical compounds such as disclosed by Powell et al. by further including various other art-accepted cosolvents such as those taught by Kimura et al. to

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effectively obtain desired compounds and/or oils therefrom, including from rosemary (*Rosmarinus officinalis*) as also taught by Kimura, for the benefits disclosed therein. Adapting and choosing particular mixtures and amounts of such cosolvents and employing particular conventional working conditions (e.g., evaporation via the film evaporation techniques claimed or using art-recognized column distillation to distill the organic solvents therefrom) are deemed merely matters of judicious selection and routine optimization which are well within the purview of the skilled artisan.

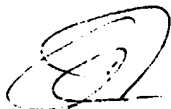
From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

No claim is allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Tate whose telephone number is (703) 305-7114. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback, can be reached at (703) 306-3220. The Group receptionist may be reached at (703) 308-0196. The fax number for art unit 1654 is (703) 872-9306.



Christopher R. Tate
Primary Examiner, Group 1654